A. TITLE: ROCK RIVER BASIN, WISCONSIN, TMDL DEVELOPMENT

B. PERIOD OF PERFORMANCE:

COMPLETION DELIVERY DATE: May 1, 2008

C. TASK ORDER MANAGER (TOM): NAME: Jean Chruscicki_____

TITLE Environmental Scientist
PHONE 312-353-1435_____
FAX 312-886-7804_____
E-MAIL chruscicki.jean@epa.gov

D. TASKS FOR ROCK RIVER BASIN, WISCONSIN, TMDL

1. The contractor shall develop a TMDL for the Rock River Basin which is impaired by sediment, causing degraded habitat, and phosphorus which creates low dissolved oxygen and impairs various designated uses by the Wisconsin Department of Natural Resources (WDNR) (see attachment). There are other contaminants that will not be addressed in this TMDL, such as PCBs. The Rock River Basin covers 3,777 square miles extending over 10 counties in south central Wisconsin. There are 3,900 total stream miles and 443 lakes and impoundments. Most of the stream miles are impaired. The impairments to be addressed in this TMDL are WBID #s in seven counties: Dane, Rock, Waukesha, Jefferson, Dodge, Walworth, and Fond du Lac. There are 18 segments in the Lower reach and 28 segments in the Upper reach. The attached table summarizes the segments of the river included in the TMDL study area and impairments, current use and designated use categories, in the Upper and Lower reaches of the river.

   Sediment, sand, silt, and soft organic matter covers the bottom gravel substrate of the streams and rivers, resulting in an unsuitable habitat for fish and macroinvertebrate communities. Sedimentation also causes elevated turbidity which reduces the penetration of light necessary for photosynthesis in aquatic plants, reduces the feeding efficiency of visual predators and filter feeders, and lowers the respiratory capacity of aquatic invertebrates by clogging their gill surfaces. In the Rock River Basin, phosphorus often attaches to the sediment particles and are transported to streams during runoff events. This causes low dissolved oxygen impairments in many of the streams and rivers. Overall, sediment originates primarily from agricultural runoff. However, poorly managed construction sites also significantly contribute sediment to waterbodies in the basin.

   The complete list of fish and aquatic life designated use sub-categories is contained in S. NR 102.04(3) intro, (a) through (e), Wis. Adm. Code; as follows:

"FISH AND OTHER AQUATIC LIFE USES. The department shall classify all surface waters into one of the fish and other aquatic life subcategories described in this subsection. Only those use subcategories identified in pars. (a) to (c) shall be considered suitable for the protection and propagation of a balanced fish and other aquatic life community as provided in the federal water pollution control act amendments of 1972, P.L. 92-500; 33 USC 1251 et.seq.

"(a) *Cold water communities*. This subcategory includes surface waters capable of supporting a community of cold water fish and aquatic life, or serving as a spawning area for cold water fish species. This subcategory includes, but is not restricted to, surface waters identified as trout water by the department of natural resources (Wisconsin Trout Streams, publication 6-3600 (80)).

(b) *Warm water sport fish communities.* This subcategory includes surface waters capable of supporting a community of warm water sport fish or serving as a spawning area for warm water sport fish.

(c) *Warm water forage fish communities.* This subcategory includes surface waters capable of supporting an abundant diverse community of forage fish and other aquatic life.

(d) *Limited forage fish communities.* (Intermediate surface waters). This subcategory includes surface waters of limited capacity and naturally poor water quality or habitat. These surface waters are capable of supporting only a limited community of forage fish and other aquatic life.

(e) *Limited aquatic life.* (Marginal surface waters). This subcategory includes surface waters of severely limited capacity and naturally poor water quality or habitat. These surface waters are capable of supporting only a limited community of aquatic life."

Chapter NR 1.02(7)(b), Wis. Adm. Code, describes the different classes of trout fishery as follows:

"A class III trout stream is a stream or portion thereof that:

a. Requires the annual stocking of trout to provide a significant harvest, and
b. Does not provide habitat suitable for the survival of trout throughout the year, or for natural reproduction of trout."

"A class II trout stream is a stream or portion thereof that:

a. Contains a population of trout made up of one or more age groups, above the age [of] one year, in sufficient numbers to indicate substantial survival from one year to the next, and
b. May or may not have natural reproduction of trout occurring; however, stocking is necessary to fully utilize the available trout habitat or to sustain the fishery."

2. The contractor shall use existing data and WDNR approved guidance and policies, or methodologies, to develop these TMDLs for the Rock River Basin for the phosphorus and sediment to address degraded habitat and low dissolved oxygen. Additional information will be available on the website at http://dnr.wi.gov/org/gmu/lowerrock/rockreport_4_02.html for a better estimate of effort needed for completion of the project. There is also a past study in the area completed by EarthTech in 2000 using the SWAT model that will be available upon request.

3. Within 30 days of the award of this task order, the contractor shall present its approach for developing these TMDLs for EPA approval. This initial approach shall include the contractor's assessment of available data, applicable tools and models and additional data requirements.

   a. Guidelines for data - The contractor must ensure that the data are acceptable. WDNR will be available to consult on data issues regarding regulatory guidelines, acceptability of historic data, and acceptability of data collected by outside sources using appropriate technical protocols.
   b. Expected modeling inputs – Wisconsin will define current and expected designated uses, standards, targets, details pertaining to causes and sources of impairments to be integrated into the TMDL. The contractor will calculate the load and wasteload reductions on a daily basis (but may additionally be presented seasonally if more applicable) resulting from comparing the current impaired baseline scenario to future possible changes, such as, riparian buffer zone development, wetland restoration, conservation tillage, controls for urban runoff, including construction site erosion control, elimination of CSOs, SSOs, or WWTPs.
   c. Expected modeling outputs – the contractor will coordinate with Wisconsin to define details of the project to ensure outputs that are applicable to the regulated community. A conference call will occur before the commencement of modeling to ensure that all parties understand what the model may or may not be able to assess.

4. The contractor shall submit the draft TMDL submittal including both contaminants, and the upper and lower reaches, to the EPA no later than December 31, 2007. The draft report shall comply with the elements needed for TMDL approval listed in the attachment (TMDL template). Five hard copies and one electronic copy in MicrosoftWord format shall be submitted to the TOM.

5. Meetings - The contractor shall provide one day of training/overview of the project to USEPA and Wisconsin personnel to explain the process and methodologies used in the Rock River Basin TMDL development. The date and location are to be determined, but likely in Madison, Wisconsin, or a mutually agreed upon location near the watershed. There will be two additional meetings (one may be in conjunction with the overview session) to address concerns and familiarize the stakeholder community with the TMDL process and methodology, one kick-off meeting and one interim meeting.

6. Public meeting - The contractor shall send two representatives to the public meeting on the draft TMDL submittal to be scheduled on a mutually agreed upon time to fulfill requirements for the public notice. The contractor shall draft and submit responses to the public comments received on the submittal to the TOM no later than two weeks after they are received.

7. The final TMDL report is due to the EPA no later than April 15, 2008. To be acceptable, the final report shall meet the standards in the attachment (TMDL template), and shall be submitted with all applicable data files, model input files, a working version of any model(s) used, and copies of all references used in developing the TMDL. The report shall be submitted to the TOM with five hard copies and one electronic copy in Microsoft Word format.